

REMARKS

Claims 1-12 and 14-20 are pending. By this Amendment, claims 1, 5 and 14 are amended to even more clearly distinguish over the applied references. The amendments are supported by the original application. For example, Figs. 4, 5 and 7 show that the downward facing lyophilic portion (surfaces 5 and 7, respectively) directly communicates with the gap surrounding the held substrate and extends radially outward from the gap so that a liquid in the gap flows radially outward to the downward facing lyophilic portion. Also see, for example, the specification at page 4, lines 20-23, page 19, line 25 - page 20, line 10 and page 21, lines 4-15. Thus, no new matter is added by the above amendments.

Claims 14-16 stand rejected under 35 U.S.C. §102(e) over Garcia et al. (U.S. Patent No. 6,988,327). The rejection is respectfully traversed.

Garcia et al. does not disclose an exposure method in which the upper surface of a held substrate is irradiated with an image of a pattern through liquid as recited in independent claim 14. The Office Action read the previous "exposing" step of claim 14 on Garcia et al.'s action of placing a proximity head 106a-5 near the substrate (see page 3, lines 1-2 of the Office Action). Garcia et al. does not irradiate an image of a pattern onto the upper surface of a held substrate. Withdrawal of the rejection is requested.

Claims 1-12 and 14-20 stand rejected under 35 U.S.C. §103(a) over Lof et al. (US 2004/0160582) in view of Hayashi et al. (US 2001/0035897). The rejection is respectfully traversed.

Lof et al. modified by Hayashi et al. does not render obvious the feature recited in independent claims 1 and 14 that the downward facing lyophilic portion directly communicates with the gap [which is along an outer circumferential part of the held substrate] and extends radially outward from the gap so that a liquid in the gap flows from the gap radially outward to the downward facing lyophilic portion. In order to "read" Applicants'

claims on the structure of Lof et al., the Office Action asserts that surface A of Lof et al.'s compartment 44 (identified by the Examiner in Fig. 7a of Lof et al. - see page 5 of the Office Action) corresponds to the claimed downward facing surface, which the Office Action asserts would have been obvious to make lyophilic in view of Hayashi et al. However, surface A of Lof et al. does not directly communicate with the gap surrounding the Lof et al. substrate, and does not extend radially outward from the gap. In Lof et al., the liquid must flow radially inward from the gap along the undersurface of the held substrate, not radially outward from the gap, to reach the surface A of Lof et al., as is apparent from the drawing taken from Lof et al. and provided on page 5 of the Office Action. As recited in independent claims 1 and 14 (and as shown in Applicants' drawings), the claimed downward facing lyophilic surface directly communicates with the gap along the outer circumferential part of the held substrate and extends radially outward from the gap so that liquid flows from the gap radially outward to the downward facing lyophilic portion. This direction of liquid flow substantially reduces the possibility that liquid may reach the substrate holder. Accordingly, even if the teachings of Hayashi et al. are applied to Lof et al., the combinations of features recited in independent claims 1 and 14 would not result. Withdrawal of the rejection is requested.

Claims 1-12 and 14-20 stand rejected under 35 U.S.C. §103(a) over Fukami et al. (WO99/49504) in view of Garcia et al. The rejection is respectfully traversed.

Applicants respectfully submit that it would not have been obvious to modify Fukami et al. in view of Garcia et al. to provide the claimed lyophilic portion and recovery device in the system of Fukami et al. The Garcia et al. system is a separate system for cleaning wafers. As clearly shown in the drawings of Fukami et al., there is no gap along an outer circumferential part of the substrate held by the Fukami et al. substrate holder. Thus, there is no reason to incorporate a lyophilic portion or recovery device of Garcia et al. into the Fukami et al. system. Furthermore, because the system of Garcia et al. provides structure

(devices 106a-5 and 106b-5) that move above and below the substrate, it is unclear how the system of Garcia et al. could be incorporated into the Fukami et al. exposure apparatus because a projection lens PL is disposed above the Fukami et al. substrate, and much structure of the stage of Fukami et al. is disposed below the substrate. Accordingly, Applicants respectfully submit that it would not have been obvious to provide the structure of Garcia et al. in the Fukami et al. apparatus.

Furthermore, Applicants respectfully submit that Fukami et al. and Garcia et al. do not disclose or render obvious the combinations of features recited in independent claims 1 and 14. In particular, the references do not disclose or render obvious an exposure apparatus or method in which a downward facing lyophilic portion directly communicates with a gap that surrounds a substrate held by a holder and extends radially outward from the gap so that liquid in the gap flows from the gap radially outward to the downward facing lyophilic portion. Accordingly, independent claims 1 and 14, along with their dependent claims, are patentable over Fukami et al. and Garcia et al.

Withdrawal of the rejection is requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone listed below.

Respectfully submitted,

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MAC:jls

Attachment:
Petition for Extension of Time

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